

CLAIM AMENDMENTS

1 1. (original) Cathode for high-temperature fuel cell
2 comprising a cathode material with the chemical composition
3 according to the formula $\text{Ln}_{1-x-y}\text{M}_y\text{Fe}_{1-z}\text{C}_z\text{O}_{3-\delta}$
4 wherein

5 $0.02 \leq x \leq 0.05,$

6 $0.1 \leq y \leq 0.6,$

7 $0.1 \leq z \leq 0.3,$

8 $0 \leq \delta \leq 0.25$

9 and wherein Ln = lanthanide, M = strontium or calcium
10 and C = cobalt or copper,
11 wherein the cathode has an average grain size in the range of 0.4
12 to 1.0 μm .

1 2. (original) The cathode according to claim 1 wherein
2 $0.3 \leq y \leq 0.5$, especially wherein $y = 0.4$.

1 3. (currently amended) The cathode according to ~~one of~~
2 ~~claims~~ claim 1 ~~[[to 2]]~~ wherein $0.15 \leq z \leq 0.25$, especially wherein
3 $z = 0.2$.

1 4. (currently amended) The cathode according to ~~one of~~
2 ~~claims~~ claim 1 ~~[[to 3]]~~ wherein Ln = lanthanum.

1 5. (currently amended) The cathode according to ~~one of~~
2 ~~claims~~ claim 1 [[to 4]] wherein M = strontium.

1 6. (currently amended) The cathode according to ~~one of~~
2 ~~claims~~ claim 1 [[to 5]] wherein C = cobalt.

1 7. (currently amended) The cathode according to ~~one of~~
2 ~~claims~~ claim 1 [[to 6]] comprising $\text{La}_{0.58}\text{Sr}_{0.4}\text{Fe}_{0.8}\text{Co}_{0.2}\text{O}_{3-\delta}$,
3 $\text{La}_{0.55}\text{Sr}_{0.4}\text{Fe}_{0.8}\text{Co}_{0.2}\text{O}_{3-\delta}$, $\text{La}_{0.78}\text{Sr}_{0.2}\text{Fe}_{0.8}\text{Co}_{0.2}\text{O}_{3-\delta}$ or $\text{La}_{0.58}\text{Sr}_{0.4}\text{Fe}_{0.8}\text{Cu}_{0.2}\text{O}_{3-\delta}$.

1 8. (currently amended) The cathode according to ~~one of~~
2 ~~claims~~ claim 1 [[to 7]], wherein the cathode has an average grain
3 size in the range of 0.6 to 0.8 μm .

1 9. (currently amended) The cathode according to ~~one of~~
2 ~~claims~~ claim 1 [[to 8]] wherein a porosity is equal to between 20
3 and 40%, especially between 25 and 35%.

1 10. (original) A method of preparing a cathode ac-
2 cording to ~~one of claims~~ claim 1 [[to 9]] comprising the steps of:
3 applying and sintering onto an anode-electrolyte
4 composite a $(\text{Ce}, \text{Gd})\text{O}_{2-\delta}$ powder with an average grain size of less
5 than 0.8 μm such that a $(\text{Ce}, \text{Gd})\text{O}_{2-\delta}$ intermediate layer results,

6 applying and sintering onto this intermediate layer a
7 cathode material with the chemical composition according to the
8 formula $\text{Ln}_{1-x-y}\text{M}_y\text{Fe}_{1-z}\text{C}_z\text{O}_{3-\delta}$ wherein

9 $0.02 \leq x \leq 0.05,$

10 $0.1 \leq y \leq 0.6,$

11 $0.1 \leq z \leq 0.3,$

12 $0 \leq \delta \leq 0.25$

13 and wherein Ln = lanthanide, M = strontium or calcium and C =
14 cobalt or copper as powder wherein an average grain size of less
15 than 2 μm .

1 11. (original) The method according to claim 10 wherein
2 the cathode material is applied as powder with an average grain
3 size between 0.6 and 0.8 μm .

1 12. (currently amended) Use of a cathode according to
2 ~~one of claims~~ claim 1 [[to 9]] in a fuel cell, wherein the cathode
3 is arranged adjacent to a $(\text{Ce}, \text{Gd})\text{O}_{2-\delta}$ intermediate layer wherein a
4 porosity of less than 30%.